

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 10

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HERBERT EICHENAUER,
KARL-HEINZ OTT, DIETER WITTMANN
and ALFRED PISCHTSCHAN

Appeal No. 96-1795
Application No. 08/262,745¹

ON BRIEF

Before SOFOCLEOUS, WALTZ, and SPIEGEL, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1 through 16, which are the only claims in this application.

¹ Application for patent filed June 20, 1994. According to appellants, the application is a continuation-in-part of 08/052,591, filed April 26, 1993.

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According to appellants, the invention is directed to thermoplastic ABS materials having high strength, high heat resistance, good hardness, good surface gloss and very good process ability (Brief, pages 2 and 4). Appellants state that the claims on appeal stand or fall together (Brief, page 7). Accordingly, we select claim 1 from the group of claims and decide this appeal as to the grounds of rejection on the basis of this claim alone. See 37 CFR § 1.192(c)(7)(1995). Illustrative claim 1 is reproduced and attached as an Appendix to this decision.

The examiner has relied upon the following references in support of the rejections:

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| Cincera et al. (Cincera) | 3,903,200 | Sep. 2, |
| 1975 | | |
| Kodama et al. (Kodama) | 5,093,419 | Mar. 3, |
| 1992 | | |
| Lausberg et al. (Lausberg) | 5,216,062 | Jun. 1, |
| 1993 Eichenauer et al. (Eichenauer I) | 5,302,663 | Apr. |
| 12, 1994 | | |
| (effective filing date of Nov. 18, 1991) | | |
| Eichenauer et al. (Eichenauer II) | 5,302,664 | Apr. 12, |
| 1994 | | |
| (effective filing date of Nov. 18, 1991) | | |
| Hiemenz, <i>Polymer Chemistry</i> , pp. 537-541, Marcel Dekker, Inc., 1984. | | |

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Claims 1, 2, 4, 6-10, 12 and 13 stand rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as unpatentable over Eichenauer I or II (Answer, page 3). The same claims also stand rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-7 of Eichenauer I or claims 1-8 of Eichenauer II (Answer, page 5). Claims 1, 3, 5-9, 11, 12 and 14 stand rejected under § 103 as unpatentable over Lausberg in view of Eichenauer I or II (Answer, page 4). The same claims also stand rejected for obviousness-type double patenting as unpatentable over claims 1-7 and claims 1-8 of Eichenauer I and II, respectively, in view of Lausberg (Answer, page 5). Claims 1, 2, 4, 6-10 and 12-16 stand rejected under § 103 as unpatentable over Kodama in view of Eichenauer I or II (Answer, page 4). The same claims also stand rejected for obviousness-type double patenting as unpatentable over claims 1-7 and claims 1-8 of Eichenauer I and II, respectively, in view of Kodama (Answer, page 5). Claims 1, 6-9 and 12 stand rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as unpatentable over Cincera (Answer, page 6).

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We reverse the rejection of claims 1, 6-9 and 12 under § 102(b)/103 over Cincera and the rejection of claims 1, 3, 5-9, 11, 12 and 14 under § 102(e) as anticipated by Eichenauer I or II. We *affirm* all of the remaining rejections essentially for the reasons set forth by the examiner in the Answer. We add the following comments for completeness and emphasis.

OPINION

A. The Rejections under 35 U.S.C. § 102

Under 35 U.S.C. § 102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim. *In re Bond*, 910 F.2d 831, 832, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990). Appealed claim 1 recites specific amounts and average molecular weight limitations for components A) through C).

The examiner apparently recognizes that the specific average molecular weight limitations of appealed claim 1 do not overlap with those disclosed by Eichenauer I, II or Cincera (Answer, pages 3 and 6, see also the Brief, page 7). However, the examiner urges that the normal molecular weight distribution of a SAN (styrene/acrylonitrile) copolymer will

have large amounts of SAN in lower ranges, thus certainly meeting the minimum amounts required by the claims on appeal (*Id.*). In other words, the examiner is urging that it is *inherent* that each higher molecular weight SAN fraction will contain small amounts of lower molecular weight SAN sufficient to meet the limitations of the appealed claims.

As stated in *In re Robertson*²:

To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.' [Citation omitted]. 'Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.' [Citations omitted].

The examiner's citation of Hiemenz (Answer, page 7) is not sufficient evidence that the SAN copolymer of Eichenauer I, II or Cincera will *necessarily* contain both the claimed amounts and average molecular weights of lower M_w SAN fractions. Hiemenz merely shows that different fractions of a polymer are made of different molecular weights to ultimately

² 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999).

achieve an average molecular weight. At most, the examiner has shown that a higher M_w fraction *may* contain *some* amount of a lower M_w fraction. However, the examiner has not shown that the higher molecular weight SAN fraction of Eichenauer I, II, or Cincera will necessarily contain the specific amounts and average molecular weights recited for the lower average molecular weight fractions of appealed claim 1. Even assuming the examiner's argument of inherency is correct, the examiner has not shown or explained why Cincera meets the limitation of appealed claim 1 that "the 0.1 to 10 parts by weight of component C) is in *addition* to any thermoplastic copolymers or terpolymers having an average molecular weight (M_w) in the range from 1,500 to 6,000 that may be present in components A) and B)." (Emphasis added, see the Answer, page 9).

For the foregoing reasons, the rejections under § 102(b) over Cincera and under § 102(e) over Eichenauer I or II are reversed.

B. The Rejections under § 103

As noted by the examiner on page 6 of the Answer, Cincera discloses components A), B) and D) as recited in appealed

claim 1. The examiner's arguments regarding the inherency of Cincera's high average molecular weight fraction including a low average molecular weight fraction have been discussed above. Cincera does teach that "[s]ome low molecular [sic, weight] polymer may be formed during the heating and separation steps." (column 21, lines 30-31) but the examiner has not cited any disclosure, teaching or suggestion in Cincera regarding the amounts or specific molecular weights for this "low molecular polymer". Accordingly, the rejection under § 103 over Cincera is reversed.

The remaining rejections under § 103 involve Eichenauer I or II. As noted by appellants on pages 7-9 of the Brief and the examiner on pages 3-4 of the Answer, Eichenauer I or II discloses components A) through D) in overlapping amounts as recited in appealed claim 1 with two differences. The minimum M_w of component A) in the references is 120,000 while the maximum M_w of component A) in appealed claim 1 is 119,000. Similarly for component B), the minimum of the references is 50,000 while appealed claim 1 recites a maximum M_w of 49,500.

Appellants submit that the examiner has failed to provide any reasoning for why the claims are obvious in view of

Eichenauer I or II and thus has not established a *prima facie* case of obviousness (Brief, pages 9-11).

"[T]he examiner bears the initial burden, on review of the prior art ..., of presenting a *prima facie* case of unpatentability." *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). However, we disagree with appellants' argument since the examiner has provided reasoning sufficient to establish a *prima facie* case of obviousness (see the Answer, page 8).³ When the ranges of the prior art and the claims on appeal are so close, one of ordinary skill in the art would have the expectation of similar properties in the absence of any showing of unexpected results. *In re Geisler*, 116 F.3d 1465, 1469-70, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997); *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990); *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 783, 227 USPQ 773, 779 (Fed. Cir. 1985). It is

³It should also be noted that molecular weight determination is not exact, as shown by appellants' examples (see the specification, page 20, line 13, "ca. 51,000") and the examples in Eichenauer I or II (e.g., see Eichenauer I, column 6, lines 16, 25, 30, and 35, "approx.").

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noted that appellants have not submitted any showing of comparative results.

The examiner also relies upon combinations of Lausberg and Kodama with Eichenauer I or II. The examiner applies Lausberg for the disclosure of methylstyrene/AN copolymer, ABS (acrylonitrile/butadiene/styrene) and polyurethane while Kodama is directed to methylstyrene/AN copolymer, ABS and polyesters (Answer, page 4). The examiner admits that Lausberg and Kodama do not disclose the molecular weight distribution of the SAN copolymer as recited in the claims on appeal but concludes that it would have been obvious to the artisan to use the trimodal molecular weight distribution of Eichenauer I or II in the blend of Kodama or Lausberg to achieve the advantageous properties taught by Eichenauer I or II (*Id.*).

Appellants argue that there is no teaching or suggestion in any of the cited references that would lead an artisan to combine the teachings of Eichenauer I or II with the teachings of Lausberg or Kodama in the manner suggested by the examiner (Brief, pages 11-13). Appellants' arguments are not well taken for the reason set forth by the examiner on pages 4 and

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8 of the Answer, namely that Eichenauer I and II teach the superiority of trimodal SAN copolymers over mono- and dimodal (i.e., one or two average molecular weight) SAN copolymers in a blend similar to that of Lausberg and Kodama. See Eichenauer I, column 6, line 12 - column 7, line 35, especially Tables 1 and 2; Eichenauer II, column 6, line 10 - column 7, line 40, especially Tables 1 and 2. Note Comparison Examples 7-10 in each reference, which show poorer results when one or two ranges of molecular weight SAN copolymer are employed as compared to Examples 1-6 where trimodal SAN copolymers are blended with the other components.

For the foregoing reasons and those set forth in the Answer, we determine that the examiner has established a *prima facie* case of obviousness in view of the applied prior art. Determining patentability on the totality of the record, with due consideration of appellants' arguments, the preponderance of evidence weighs in favor of obviousness within the meaning of

§ 103. *In re Oetiker, supra*. Accordingly, the rejection of claims 1, 2, 4, 6-10, 12 and 13 under § 103 as unpatentable

over Eichenauer I or II is affirmed. The rejection of claims 1, 3, 5-9, 11, 12 and 14 under § 103 as unpatentable over Lausberg in view of Eichenauer I or II is affirmed. The rejection of claims 1, 2, 4, 6-10 and 12-16 under § 103 as unpatentable over Kodama in view of Eichenauer I or II is affirmed.

C. The Rejections for Obviousness-type Double Patenting

In obviousness-type double patenting rejections, one must determine whether the claims of the later filed application would have been obvious in view of the claims of an earlier patent. *In re Goodman*, 11 F.3d 1046, 1052, 29 USPQ2d 2010, 2015 (Fed. Cir. 1993). Any analysis employed parallels the guidelines for analysis of a § 103 obviousness determination. *In re Braat*, 937 F.2d 589, 592, 19 USPQ2d 1289, 1292 (Fed. Cir. 1991); *In re Braithwaite*, 379 F.2d 594, 600 n.4, 154 USPQ 29, 34 n.4 (CCPA 1967). Appellants' arguments regarding the three obviousness-type double patenting rejections are the same as discussed above with respect to the corresponding rejections under § 103 (Brief, pages 14-22). Accordingly, the

three obviousness-type double patenting rejections are affirmed for reasons set forth above and in the Answer.

D. Summary

The rejection of claims 1, 2, 4, 6-10, 12 and 13 under § 102(e) as anticipated by Eichenauer I or II is reversed. The rejection of these same claims under § 103 as unpatentable over Eichenauer I or II is affirmed. The rejection of these same claims under the judicially created doctrine of obviousness-type double patenting over claims 1-7 of Eichenauer I or claims 1-8 of Eichenauer II is also affirmed. The rejection of claims 1, 3, 5-9, 11, 12 and 14 under § 103 as unpatentable over Lausberg in view of Eichenauer I or II is affirmed. The rejection of these same claims under the judicially created doctrine of obviousness-type double patenting over claims 1-7 of Eichenauer I or claims 1-8 of Eichenauer II, each in view of Lausberg, is also affirmed. The rejection of claims 1, 2, 4, 6-10 and 12-16 under § 103 as unpatentable over Kodama in view of Eichenauer I or II is affirmed. The rejection of these same claims under the judicially created doctrine of obviousness-type double patenting over claims 1-7 of Eichenauer I or claims 1-8 of

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Eichenauer II, each in view of Kodama, is also affirmed. The rejection of claims 1, 6-9 and 12 under § 102(b) as anticipated by or, in the alternative, under § 103 as unpatentable over Cincera is reversed. Accordingly, the decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

| | | |
|-----------------------------|---|-----------------|
| MICHAEL SOFOCLEOUS |) | |
| Administrative Patent Judge |) | |
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| |) | |
| |) | BOARD OF PATENT |
| THOMAS WALTZ |) | APPEALS |
| Administrative Patent Judge |) | AND |
| |) | INTERFERENCES |
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CAROL A. SPIEGEL)
Administrative Patent Judge)

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APPENDIX

Claim 1. Thermoplastic materials comprising

A) 5 to 80 parts by weight of a thermoplastic co- or terpolymer made from the monomers styrene, "-methylstyrene, methyl methacrylate, acrylonitrile with an average molecular weight (M_w) of 70,000 to 119,000,

B) 1 to 30 parts by weight of a thermoplastic copolymer made from 60 to 95% by weight of styrene and/or "-methylstyrene and 40 to 5% by weight of acrylonitrile with an average molecular weight (M_w) of 25,000 to 49,500,

C) 0.1 to 10 parts by weight of thermoplastic co- or terpolymer made from the monomers styrene, "-methylstyrene, methyl methacrylate, acrylonitrile, with an average molecular weight (M_w) of 1,500 to 6,000 and

D) 0.5 to 50 parts by weight of a particulate graft rubber with a glass transition temperature of # 10°C and an average particle diameter (d_{50}) of 0.05 to 0.50 Fm, which contains 15 to 80 parts by weight of a chemically bonded polymer made from styrene, methyl methacrylate, acrylonitrile or mixtures thereof per 100 parts by weight of rubber, wherein the 0.1 to 10 parts by weight of component C) is in addition to any thermoplastic copolymers or terpolymers having an average molecular weight (M_w) in the range from 1,500 to 6,000 that may be present in components A) and B).

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APJ WALTZ

APJ SOFOCLEOUS

APJ SPIEGEL

DECISION: AFFIRMED

Send Reference(s): Yes No
or Translation (s)

Panel Change: Yes No

Index Sheet-2901 Rejection(s): _____

Prepared: June 21, 2001

Draft Final

3 MEM. CONF. Y N

OB/HD GAU

PALM / ACTS 2 / BOOK
DISK (FOIA) / REPORT